Commission's Secretary
Magalie Roman Salas
Office of the Secretary
Federal Communications Commission
445 Twelfth Street, SW
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Washington, D.C. 20554

October 4, 2001

Land Mobile Communications Council:

I am writing because I have some comments for the Notice of Proposed Rulemaking on WT Docket 01-146. Allina Health Systems is comprised of 16 hospitals and 52 clinics located in Minneapolis, St Paul, greater Minnesota, and western Wisconsin.

The FCC decision to end the freeze on PLMR licenses in October 2003has caused Allina to begin a process to migrate its current medical telemetry inventory to the new WMTS or replace the inventory with totally new systems. The medical telemetry inventory totals over 500 transmitters of many manufacturers, models, and frequencies. There are 375 transmitters in the PLMR band.

Allina's principal motivation for commenting on this NPRM is to encourage the FCC to extend the proposed October 2003 deadline. The current deadline, based upon the age of our current telemetry, will result in significant capital expense to our system. . The American Hospital Association publishes lifecycles for many medical device types and indicates an 8-10 year replacement guideline for telemetric patient monitoring systems. Similar to other large hospital organizations, Allina has medical telemetry systems that are at every stage along the replacement guideline. The effect of the proposed deadline for Allina is both positive and negative. Positive, because the PLMR deadline will facilitate conversion to new WMTS for the very old telemetry. Negative, because the PLMR deadline will force costly upgrades to current telemetry systems that are not at the latest technological level but nevertheless are not near the end of their useful life. Hospital organizations like Allina will stand to suffer financial losses due to the disruption in the their normal capital replacement strategy. An extension of the deadline to October 2005 would preserve our ability to upgrade our equipment in the ordinary course.

Communications from the FCC and FDA on WMTS risks have been overwhelming over the past few years. Allina has complied with these agencies' guidelines by understanding the changes, analyzing the risk, and making plans to migrate. The following report summarizes the approach Allina has taken to manage these medical telemetry issues:

WMTS Frequency Project

Allina's options for avoiding electromagnetic interference (EMI) risk with medical telemetry

Objectives

To inform Allina Hospitals and Clinics that their existing wireless medical telemetry systems may be at increased risk of electromagnetic interference (EMI) if they continue to operate in the range of frequencies in which most medical telemetry devices are currently operating. To address this risk, the

Federal Communications Commission (FCC) has created a new Wireless Medical Telemetry Service (WMTS) that will allow medical telemetry systems to operate on an interference-protected basis. This project is to evaluate whether Allina's medical telemetry systems are a risk, and to recommend the appropriate measures to reduce that risk.

Background

Currently, most wireless medical telemetry devices operate as secondary users in commercial broadcast TV bands and in the private land mobile radio service (PLMRS) band. As secondary users, medical telemetry must accept interference from, and not interfere with, primary licenses. Typically, if there is interference from a primary user, the medical telemetry system will be unusable. This happened in 1998 when DTV transmissions disrupted medical telemetry systems in two Texas hospitals. These frequency bands will be used more extensively by digital TV and high power PLMRS operators, which is likely to result in an increased risk of interference with medical telemetry.

Findings/Additional Analysis

Allina Clinical Equipment Services (CES) continues to evaluate the growing wireless communications industry and the ever-greater risk of harmful interference to Allina Hospitals and Clinics' medical telemetry systems. The FCC, FDA, and other agencies have flooded Allina with communications about Wireless Medical Telemetry Systems (WMTS) risks.

The Federal Communications Commission (FCC) allocation of new WMTS frequencies provides primary user status. This insures there will be little to no future risk of interference. Allina Hospitals & Clinics medical telemetry systems will need to be upgraded/replaced to the new frequencies. Allina CES would like to assist you with the process of understanding your options: Upgrade vs. Replacement. Other criteria for your decision may include cost, age of equipment, availability of space, construction needs, staff training, etc.

Although current Allina Hospitals & Clinics medical telemetry inventory is safe from harmful interference, the frequency bands used by medical telemetry in the United States are getting crowded. Increasingly, competing users are occupying those frequencies. The protections currently afforded to current medical telemetry systems will end in October 2003. At that time the FCC will begin licensing other users with little regard for medical telemetry systems still operating in the old bandwidths. Allina CES investigated the possibility of acquiring FCC primary user licenses for its existing medical telemetry systems, however the FCC will not allow this option.

Allina's only option for avoiding the EMI risk for the medical telemetry inventory will be upgrading (if available) or replacement before October 2003. The total costs required to bring Allina's medical telemetry inventory into compliance with the new FCC WMTS standard is outlined in the following table:

	Recommendation	Upgrade	Replacement
Allina Total	$6,260,635.99	$2,271,726.00	$8,018,881.99

Note: Analysis and quotes are direct capital purchase cost. Ancillary costs (i.e., medical staff training, IS and networking fees, and other construction costs) were not considered in estimates.

Recommendations

Allina CES recommends that all Allina owned medical telemetry systems operate in the WMTS bands before the FCC migration deadline of October 2003. With the assistance of the medical device manufacturers, clinical staff, and CES technical staff, Allina CES has determined, at most locations, the medical telemetry systems at risk of EMI after October 2003.

The options seen in the table above are a result of the criteria used to determine a best choice for each medical telemetry system currently in the Allina inventory. This is based on the following criteria: frequency, equipment history, equipment age, feasibility of upgrade, customer and CES Technician specific recommendations, and other analysis.

The imminent WMTS frequency migration is not in the best interest of Allina and other hospitals. Similar to Y2K, Allina must scramble to minimize the risk of electromagnetic interference for medical telemetry systems. Medical device manufactures are also scrambling to create "patches" for customers who do not want to replace current telemetry systems.

However, manufacturers are also taking advantage of the new WMTS frequencies by re-designing products fully utilizing the benefits of the WMTS bandwidth. These new capabilities for telemetry patient monitoring systems include (but are not limited to): patient-worn monitor transceivers, nursing surveillance devices, and remote control (RF and web-based). If Allina is being forced to upgrade or replace equipment prior to full depreciation due to the migration deadline, it will miss the opportunity to take advantage of these new technological breakthroughs can occur. In most cases, these technology breakthroughs will not be marketed until after the PLMR deadline. With today's healthcare environment, hospital systems such as Allina Health System must be prudent with every capital dollar available; the scenario, as outlined above, places hospital systems like ourselves in an extremely difficult position regarding our investment in technology.

Sincerely,

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Biomedical Engineer